

WHAT IS CLAIMED IS:

1. An information handling system, comprising:
  - memory;
  - at least one processor operably associated with the memory;
  - a printed circuit board operable to maintain the processor and the memory;
  - 10 a plurality of vias disposed in at least one printed circuit board layer, the vias defined by a first opening on a first surface of the printed circuit board layer, a second opening at a second surface of the printed circuit board layer and at least one side wall connecting the first and second openings and defining a void therebetween; and
  - 15 a conductive material disposed on a portion of the side wall, the conductive material defining at least one inner-via trace.
2. The information handling system of Claim 1,
  - 20 further comprising the inner-via trace having a total impedance substantially approximating a printed circuit board surface mounted trace impedance.
3. The information handling system of Claim 1,
  - 25 further comprising:
    - the conductive material disposed in the void defining a plurality of inner-via traces, and
    - the plurality of inner-via traces arranged in a striped pattern, where the patterned stripes travel
  - 30 between the first opening and second opening.

4. The information handling system of Claim 1,  
further comprising a conductive pad disposed on the first  
surface of the printed circuit board layer and proximate  
the first opening and coupled to the inner-via traces.

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5. The information handling system of Claim 4,  
further comprising a conductive pad disposed on the  
second surface of the printed circuit board layer and  
proximate the second opening and coupled to the inner-via  
traces.

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6. The information handling system of Claim 1,  
further comprising a conductive trace disposed on the  
first surface of the printed circuit board layer and  
coupled to the inner-via traces.

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7. The information handling system of Claim 6,  
further comprising a conductive trace disposed on the  
second surface of the printed circuit board layer and  
coupled to the inner-via traces.

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8. The information handling system of Claim 1,  
further comprising:

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a printed circuit board having a plurality of

layers; and

at least one via disposed through a first layer and  
terminating proximate a first surface of a second layer.

9. A method for manufacturing an electronic component substrate, comprising:

defining an aperture in a first substrate layer, the aperture including a first opening at a first surface of  
5 the substrate layer, a second opening at a second surface of the substrate layer and a barrel defined by at least one side wall creating a void and traveling between the first and second openings; and

10 creating an inner-void trace on a portion of the barrel side wall and traveling between the first and second surfaces, the inner-void trace coupling a first trace on the first surface of the substrate layer to a second trace on the second surface of the substrate layer.

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10. The method of Claim 9, further comprising creating multiple inner-void traces and leaving non-trace regions of the barrel side-wall substantially devoid of conductive material.

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11. The method of Claim 9, further comprising:  
disposing at least one layer of conductive material on the barrel side wall; and  
removing portions of the conductive material from  
25 the barrel side wall, leaving only a layer of conducting material forming an inner-void trace.

12. The method of Claim 9, further comprising substantially balancing at least one electrical characteristic of the inner-void trace to a corresponding electrical characteristic of the first and second surface 5 traces.

13. The method of Claim 9, further comprising substantially balancing an impedance value of the inner-void trace with an impedance value of the first and 10 second surface traces.

14. The method of Claim 9, further comprising disposing a second substrate layer on a surface of the first substrate layer thereby forming a multi-layered 15 electronic component substrate.

15. An apparatus, comprising:

at least one substrate having a first surface and a second surface;

5 a first conductive trace disposed proximate the first surface of the substrate;

a second conductive trace disposed proximate the second surface of the substrate;

10 at least one via disposed in the substrate, the via defining an aperture in the substrate traveling from the first surface to the second surface; and

15 at least one conductive inner-via trace operably coupled to the via, the inner-via trace operably coupling the first conductive trace to the second conductive trace and having at least one electrical characteristic substantially approximating a corresponding electrical characteristic of a substrate surface conductive trace.

16. The apparatus of Claim 15, further comprising the inner-via trace having an impedance measure substantially approximating an impedance measure of the first and second conductive surface traces.

17. The apparatus of Claim 15, further comprising: the substrate having a plurality of layers; and  
25 the first conductive trace disposed between a first pair of substrate layers and the second conductive trace disposed between a second pair of substrate layers.

18. The apparatus of Claim 15, further comprising:  
the substrate having a first plurality of layers;  
and

5 the first conductive trace disposed on an external  
surface of the plurality of substrates and the second  
conductive trace disposed between adjacent layers of the  
plurality of substrates.

10 19. The apparatus of Claim 15, further comprising:  
a plurality of conductive inner-via traces; and  
the plurality of conductive inner-via traces  
collectively having at least one electrical  
characteristic substantially approximating a  
corresponding electrical characteristic of a substrate  
15 surface conductive trace.

20. The apparatus of Claim 19, further comprising  
an impedance total for the plurality of inner-via traces  
substantially approximating that of the first surface  
20 conductive trace and the second surface conductive trace.